

Docket No. 2503-1225  
PATENT  
**MAILSTOP AF**

**IN THE U.S. PATENT AND TRADEMARK OFFICE**

In re application of

Paolo MORAZZONI et al. Conf. 5191

Application No. 10/587,468 Group 1655

Filed November 27, 2006 Examiner Qiuwen Mi

USE OF A GINKGO COMPLEXES FOR THE ENHANCEMENT OF COGNITIVE FUNCTIONS AND THE ALLEVIATION OF MENTAL FATIGUE

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Assistant Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

May 2, 2011

Sir:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

A Notice of Appeal is filed herewith.

The review is requested for the reasons advanced on the attached sheets.

Respectfully submitted,

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**REASONS IN SUPPORT OF REQUEST FOR REVIEW**

Claims 23, 26-42 and 46 are pending in the application. Claims 23, 26-42 and 46 have been rejected. Claims 23, 35 and 36 are independent claims.

Claims 23, 26, 29-40 and 46 are rejected under 35 USC §103(a) as being unpatentable over PHYSIOLOGICS (Physiologics, Phosphatidylserine complex with Gingko, Internet document) in view of BOMBARDELLI (EP 0275005).

Claims 23, 26-41 and 46 are rejected under 35 USC §103(a) as being unpatentable over PHYSIOLOGICS and BOMBARDELLI, further in view of LOEW (Wiener medizinische Wochenschrift (1946), (2002), Vol. 152, No. 15-16, pp 418-22, Ref: 40).

Claims 23, 26, 29-40, 42 and 46 are rejected under 35 USC §103(a) as being unpatentable over PHYSIOLOGICS and BOMBARDELLI, further in view of KIM et al. (FASEB Journal, 2003, Vol. 17, Abstract No. 179.3).

The present invention pertains to methods for improving mental qualities and treating various mental conditions in a subject by administering an effective amount of Gingko complexed with phosphatidylserine.

The Office takes the position that the PhysioLogics reference teaches a composition comprising a phospholipid complex containing 20% phosphatidylserine and *Gingko biloba*

extract that is advertised to treat mild memory problems associated with aging. The PhysioLogics product, however, is not a Ginkgo-phosphatidylserine complex that is the subject matter of the present claims. The PhysioLogics product, "Phosphatidylserine Complex with Ginkgo," is merely a mixture of Ginkgo biloba and phospholipids, i.e., it is not Ginkgo complexed with phosphatidylserine. This is an important distinction between the compositions of the present claims and that of PhysioLogics. The PhysioLogics product is not a Ginkgo-phosphatidylserine complex as defined in the specification.

The ingredients listed in the PhysioLogics product include Neuro-PS<sup>TM</sup>, which is "phospholipid complex from soy lecithin". This phospholipid complex contains

Supplement Facts		
Serving Size 1 softgel	Amount Per Serving	%Daily Value
Vitamin C (as Ascorbic Acid)	5 mg	8%
Neuro-PS™	500 mg	
	(Phospholipid Complex from Soy Lecithin)	
	(standardized to contain 20% Phosphatidylserine, 100 mg)	
	which typically provides:	
	300 mg Phosphatidic Acid, Phosphatidylinositol, Soy Phospholipids & Glycerides, Phosphatidylcholine, Phosphatidylethanolamine	
Ginkgo Biloba Extract	30 mg	
	(standardized to contain 24% Ginkgo Flavone Glycosides, 7.2 mg)	
*Daily Value not established.		
Other ingredients: Calcium Chloride, Lecithin, Talcum		

phosphatidylserine, phosphatidic acid, phosphatidylinositol, soy phospho-lipids & glycerides, phosphatidyl-choline and phosphatidyl-ethanolamine. A second separately listed ingredient is Ginkgo biloba extract. This

information is verified by the Neuro-PS<sup>TM</sup> website (<http://www.neurops.com>), which is evidence submitted with the December 20, 2010, Amendment.

In distinction from the PhysioLogics composition, the present claims feature a Ginkgo-phosphatidylserine complex and not merely a mixture of phospholipids along with Gingko. As described in the specification, Applicants determined that Ginkgo-phosphatidylserine complexes possess physico-chemical and spectroscopic characteristics that are markedly different from those of the original components. These complexes allow the preparation of biologically active compositions that can be incorporated as active principals into pharmaceutical formulations. (see, page 6, lines 22-29).

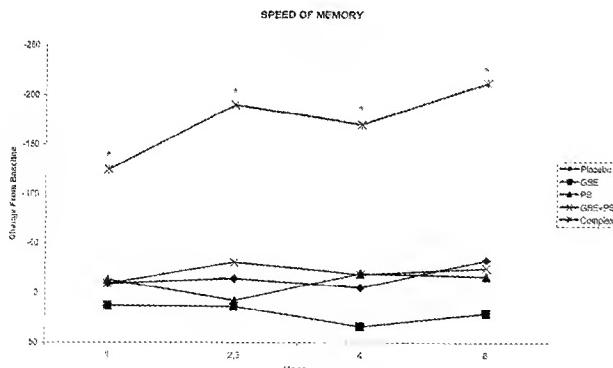
The BOMBARDELLI secondary reference discloses compositions of flavonoids and phospholipids for use in cosmetic and other topical compositions. Its teachings are limited to mixtures of *Ginkgo biloba* extract and phosphatidylcholine that reportedly possess higher bio-availability in a topical application for treating the skin (see, page 4, lines 28-30). BOMBARDELLI fails to teach or suggest that a Ginkgo-phosphatidylserine complex could improve mental qualities and treat various mental conditions, which is the subject matter of the present claims.

Applicants determined that a Ginkgo biloba-phosphatidylserine complex can be used to enhance cognitive function and alleviate mental fatigue at levels significantly higher than that provided by non-complexed Gingko and

phospholipid mixtures (see, page 3, lines 16-20 of the specification, and the Declaration of Ezio Bombardelli, of record).

As demonstrated in the Bombardelli declaration, capsules containing *Ginkgo biloba*-phosphatidylserine complex showed remarkably higher activity compared to *Ginkgo biloba* extract (GE), phosphatidylserine (PS), or mixtures (GE + PS). In cognitive assessment tests, *Ginkgo biloba* extract complexed with phosphatidylserine had outstanding effectiveness compared to other tested species (i.e. non-complexed Ginkgo or Ginkgo-phosphatidylcholine complex), regarding Quality of Memory, Picture Recognition Accuracy, Speed of Memory, Timed Memory Tasks, and other tasks concerning attention (see page 16, line 16 to page 29, line 5,

and Figures 1-6). The results of a "Speed of Memory" evaluation are shown in the graph, which is reproduced from the declaration.



BOMBARDELLI is limited to describing a topical composition shown to exhibit epithelium-repairing and fibroblast proliferation stimulating activities (see page 7,

lines 53-55). Nothing in BOMBARDELLI teaches or suggests to one of ordinary skill in the art that such a topical skin formulation would have any effects on cognitive functions or mental fatigue, as featured in the present claims.

For at least these reasons, the combination of PhysioLogics and BOMBARDELLI fails to teach or suggest any methods for enhancing cognitive function, alleviating mental fatigue, improving memory speed and quality, or treating a disease related to reduced cognitive function as featured in the presently claimed methods. The Office relies on the remaining references, LOEW and KIM, for teaching additional details regarding components of a Gingko extract and the health benefits of grape seed extract. These references, however, fail to remedy the deficiencies of PhysioLogics and BOMBARDELLI.

As a result, the combination of PhysioLogics and BOMBARDELLI, with or without LOEW and/or KIM, fails to support an allegation of *prima facie* unpatentability. Accordingly, Applicants respectfully request reconsideration and withdrawal of these rejections.